WE CLAIM:

1. A rotating media storage device (RMSD) connectable to a host, the RMSD comprising:

a moveable head to perform track following;

a disk having a circumferential track, the circumferential track having a plurality of embedded servo wedges utilized in track following, the plurality of wedges being spaced sequentially around a circumference of the circumferential track; and

a synch mark detection circuit having a first detection mode and a second detection mode, wherein, in the first detection mode, the synch mark detection circuit detects a servo synchronization signal based on the head reading a servo synchronization mark (SSM) of a servo header of an embedded servo wedge,

wherein, in the second detection mode, the synch mark detection circuit detects a servo synchronization signal based on the head reading a SSM and a wedge identifier (ID) of a servo header of an embedded servo wedge, the wedge ID being utilized in conjunction with the SSM to validate the servo synchronization signal.

2. The RMSD of claim 1, wherein a substantial majority of the plurality of embedded servo wedges each include a servo header having a concatenated SSM and wedge ID for detecting a servo synchronization signal when read by the head.

3. The RMSD of claim 2, wherein the concatenated SSM and wedge ID is located adjacent to a phase lock loop (PLL) field.

4. The RMSD of claim 3, wherein the concatenated SSM and wedge ID is located adjacent to a track identification field (TKID).

5. The RMSD of claim 1, wherein the synch mark detection circuit to further,

receive a first SSM and a first wedge ID; and

decode the first SSM and the first wedge ID.

6. The RMSD of claim 5, wherein the synch mark detection circuit to further,

receive a second SSM and a second wedge ID;

decode the second SSM and the second wedge ID; and

determine if the second wedge ID has incremented at an expected rate.

7. The RMSD of claim 6, wherein, if the second wedge ID has incremented at an expected rate in comparison to the first wedge ID, the synch mark detection circuit to declare a hard servo synchronization mode based upon a forecasted wedge ID pattern.

8. The RMSD of claim 7, wherein the hard servo synchronization mode based upon the forecasted wedge ID pattern includes performing servo synchronization based upon determining that subsequent wedge IDs of subsequent servo headers include accurately forecasted wedge ID numbers based upon the forecasted wedge ID pattern.

9. In a rotating media storage device (RMSD) connectable to a host, the RMSD including a disk having a circumferential track with a plurality of embedded servo wedges utilized in track following, the plurality of wedges being spaced sequentially around a circumference of the circumferential track, and a moveable head to perform track following, a method for performing servo synchronization comprising:

detecting a servo synchronization signal in a first mode based on the head reading a first servo synchronization mark (SSM) of a servo header of an embedded servo wedge;

detecting a servo synchronization signal in a second mode based on the head reading a first SSM and a first wedge identifier (ID) of a first servo header of an embedded servo wedge, the first wedge ID being utilized in conjunction with the first SSM to validate the servo synchronization signal, and in the second detection mode,

determining if a second wedge ID of a second servo header has incremented at an expected rate in comparison to the first wedge ID of the first servo header; and

declaring a hard servo synchronization mode based upon a forecasted wedge ID pattern.

10. The method of claim 9, wherein a substantial majority of the plurality of embedded servo wedges each include a servo header having a concatenated SSM and wedge ID for detecting a servo synchronization signal when read by the head.

11. The method of claim 10, wherein the concatenated SSM and wedge ID is located adjacent to a phase lock loop (PLL) field.

12. The method of claim 11, wherein the concatenated SSM and wedge ID is located adjacent to a track identification field (TKID).

13. The method of claim 9, further comprising:

detecting a first SSM and a first wedge ID; and

decoding the first SSM and the first wedge ID.

14. The method of claim 13, further comprising:

detecting a second SSM and a second wedge ID;

decoding the second SSM and the second wedge ID; and

determining if the second wedge ID has incremented at the expected rate.

15. The method of claim 14, wherein the hard servo synchronization mode based upon the forecasted wedge ID pattern includes performing servo synchronization based upon determining that subsequent wedge IDs of subsequent servo headers include accurately forecasted wedge ID numbers based upon the forecasted wedge ID pattern.

16. A computer system comprising a host computer and a rotating media storage device (RMSD), the RMSD comprising:

a moveable head to perform track following; and

a disk having a circumferential track, the circumferential track having a plurality of embedded servo wedges utilized in track following, the plurality of wedges being spaced sequentially around a circumference of the circumferential track; and

a synch mark detection circuit having a first detection mode and a second detection mode, wherein, in the first detection mode, the synch mark detection circuit detects a servo synchronization signal based on the head reading a servo synchronization mark (SSM) of a servo header of an embedded servo wedge,

wherein, in the second detection mode, the synch mark detection circuit detects a servo synchronization signal based on the head reading a SSM and a wedge identifier (ID) of a servo header of an embedded servo wedge, the wedge ID being utilized in conjunction with the SSM to validate the servo synchronization signal.

17. The computer system of claim 16, wherein a substantial majority of the plurality of embedded servo wedges each include a servo header having a concatenated SSM and wedge ID for detecting a servo synchronization signal when read by the head.

18. The computer system of claim 17, wherein the concatenated SSM and wedge ID is located adjacent to a phase lock loop (PLL) field.

19. The computer system of claim 18, wherein the concatenated SSM and wedge ID is located adjacent to a track identification field (TKID).

20. The computer system of claim 16, wherein the synch mark detection circuit to further,

receive a first SSM and a first wedge ID; and

decode the first SSM and the first wedge ID.

21. The computer system of claim 20, wherein the synch mark detection circuit to further,

receive a second SSM and a second wedge ID;

decode the second SSM and the second wedge ID; and

determine if the second wedge ID has incremented at an expected rate.

22. The computer system of claim 21, wherein, if the second wedge ID has incremented at an expected rate in comparison to the first wedge ID, synch mark detection circuit to declare a hard servo synchronization mode based upon a forecasted wedge ID pattern.

23. The computer system of claim 21, wherein the hard servo synchronization mode based upon the forecasted wedge ID pattern includes performing servo synchronization based upon determining that subsequent wedge IDs of subsequent servo headers include accurately forecasted wedge ID numbers based upon the forecasted wedge ID pattern.